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REVIEW OF VOLUNTARY AGREEMENTS PROGRAM

UNDER THE

DEFENSE PRODUCTION ACT

MERCURY INDUSTRY

REPORT DATED FEBRUARY 9, 1959

BY THE

ATTORNEY GENERAL

COMMITTEE ON BANKING AND CURRENCY

UNITED STATES SENATE

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STATEMENT OF THE CHAIRMAN

Under section 708(e) of the Defense Production Act of 1950, the Attorney General is directed to review the administration of that act. This review is for the purpose of determining any factors which may tend to eliminate competition, create or strengthen monopolies, injure small business, or otherwise promote undue concentration of economic power in the course of administration of the act.

The Defense Production Act Amendments of 1955 require the Attorney General to report under section 708(e) of the act at least once every 3 months, and to include in these reports a statement on the continuing review, required of the Attorney General under the 1955 amendments, of the voluntary agreements approved under section 708 of the act.

Previous quarterly reports have been made available as committee prints, as follows:

February 28, 1956 (reports dated November 9, 1955; February 9, 1956, "Tax Amortization Certificates in the Petroleum Industry"; February 20, 1956);

August 10, 1956 (reports dated May 9, 1956; August 9, 1956, "Tax Amortization Certificates in the Nitrogen Industry");

December 6, 1956 (report dated November 9, 1956, "Government Sponsored Industrial Research");

February 13, 1957 (report dated February 9, 1957, Stockpiling);

May 20, 1957 (report dated May 9, 1957, "The Titanium Metal Industry");

August 28, 1957 (report dated August 9, 1957, "The Nickel Industry and the Foreign Petroleum Supply Agreement");

November 19, 1957 (report dated November 8, 1957, "Expansion of Tungsten Supply");

February 19, 1958 (report dated February 10, 1958, "Expansion of Machine Tool Industry");

May 20, 1958 (report dated May 9, 1958, "The Newsprint Industry");

August 20, 1958 (report dated August 8, 1958, "Guaranteed Loans"); and

November 26, 1958 (report dated November 10, 1958, "Defense Minerals Exploration Assistance").

The Attorney General's report dated February 9, 1959, contains a report on the mercury industry under the Defense Production Act, and a review of recent activities of the voluntary agreements approved by the Director of the Office of Defense Mobilization and the Attorney General under section 708 of the Defense Production Act.

This report is of interest to the committee and the Senate, and to the public.

A. WILLIS ROBERTSON, *Chairman.*

THE MERCURY INDUSTRY

Report of the Attorney General Pursuant to Section 708(e) of the Defense Production Act of 1950 as Amended

FEBRUARY 9, 1959.

To the President of the United States of America and the Senate and House of Representatives of the United States of America in Congress assembled:

I have the honor to submit a report in compliance with section 708(e) of the Defense Production Act of 1950, as amended. That provision directs the Attorney General to make—

> * * * surveys for the purpose of determining any factors which may tend to eliminate competition, create or strengthen monopolies, injure small business, or otherwise promote undue concentration of economic power in the course of the administration of this Act. Such surveys, and the reports hereafter required, shall include studies of the voluntary agreements and programs authorized by this section. The Attorney General shall submit to the Congress and the President within 90 days after the approval of this Act, and at least once every three months, reports setting forth the results of such surveys and including such recommendations as he may deem desirable.

In compliance with this direction, this report, in two parts, (1) studies the competitive effects of the Defense Production Act programs to assist the mercury industry, and (2) presents the current status of outstanding voluntary agreements and programs which are under continuous review by this Department pursuant to section 708(e) of the Defense Production Act.

PART 1

THE MERCURY INDUSTRY

The mercury industry ranks 10th—in terms of total output—in world production of nonferrous metals. However, its unusual physical and chemical properties give it an industrial and military importance out of proportion to its rank. The dominant world producers have been Spain and Italy, with other countries contributing varying amounts. The United States, the largest consuming country, has traditionally produced less than its requirements.

This part reviews the competitive status of the domestic industry and the impact of governmental assistance programs under the Defense Production Act of 1950, as amended. Consideration is given, separately, to the nature of the industry involved and to governmental action designed to encourage expansion of that industry. Finally, measuring the effect of these programs, the conclusion is drawn that domestic reliance upon imports has been lessened and the competitive base of the industry broadened.

I. Nature of the Industry

A. CHARACTERISTICS AND USES OF MERCURY

Generally called quicksilver by producers and mercury by consumers, this silver-white metal is best known for its near unique characteristic of fluidity at ordinary room temperature. Its uniform volume expansion, high density, relatively high surface tension, electrical conductivity, ability to alloy readily, and chemical stability, are other important properties of this versatile metal.[1]

The uses of mercury are many and varied. Nearly half of current consumption falls into four major classifications:[2] electrical apparatus,[3] industrial and control instruments,[4] agricultural uses [5] and electrolytic preparation of chlorine and caustic soda. The latter use has become increasingly important.[6]

Mercury is also used for pharmaceuticals, dental preparations, as a catalyst, for antifouling paint and as fulminate for munitions and blasting caps. Mercury has also been used for the generation of power and for precision castings. Mercury compounds and amalgams provide many other uses. Also, in recent years the Atomic Energy Commission has received large quantities of mercury for undisclosed purposes.[7]

Substitutes exist in the pharmaceutical field, for mercury fulminate, for antifouling paint, and for some dental and agricultural uses. Also

[1] U.S. Bureau of Mines, "Materials Survey on Mercury."
[2] See appendix table I.
[3] Including mercury switches and fuses, lamps, rectifiers, and oscillators and batteries.
[4] Including thermometers, barometers, gas pressure and tank gages, flow meters, high-vacuum diffusion pumps, weightometers, and gyroscopes. It is also used in the memory unit of electronic computers.
[5] Such as insecticides and fungicides.
[6] Mercury so used is not dissipated, for upon discontinuance of use substantial recovery is possible. U.S. Bureau of Mines, "Minerals Yearbook 1955," p. 777 (1958).
[7] Report on Investigation No. 32 under sec. 332 of the Tariff Act of 1930, U.S. Tariff Commission, "Mercury (Quicksilver)," p. 6 (1958).

other processes are available to replace mercury used in electrolytic reduction, as a catalyst, and for the generation of power.[8] However, satisfactory substitutes are not presently available for other uses.[9]

B. STRUCTURE OF THE INDUSTRY

The mercury industry in the United States is small compared with other mining industries in terms of dollar value of production, number of producers and employees. In 1957, the value of all production was approximately $9.5 million (f.o.b. plants) with an estimated 800 persons engaged in primary production.[10]

Mercury has been basically an imported commodity. Spain and Italy have been the principal world sources and the principal suppliers to this country. Growth of a domestic industry has been limited by several factors. The United States suffers from high production costs in comparison with those of Spain and Italy. In addition, economic operation has been made difficult by wide fluctuations in world prices through the years.

Fluctuation in prices were probably intensified up to 1950 by the operations of a Spanish-Italian mercury group. This group sometimes maintained prices at levels which stimulated U.S. output and sometimes threw large inventories on the market so that prices were depressed and U.S. production discouraged.[11] The high world prices in 1930, for example, so stimulated U.S. production that domestic mines not only were able to supply all of our requirements for the first time in 14 years, but also had a surplus available for export. Conversely, when the foreign group reduced prices in 1931, U.S. production dropped by 50 percent in the following year.

This combine, known as Mercureo Europeo, was organized in 1928 and gained control of 80 percent of world production. Its aims were distribution of sales, control of production, and stabilization of prices. Its influence was particularly strong in world markets in the periods 1928–36 and 1945–49. However, the foreign group was reportedly dissolved in 1950.[12]

In 1950, domestic mercury production was at the lowest level in 100 years of recorded output.[13] There were only 16 mines in production. Sonoma Quicksilver Mines, Inc., was the only major producer to operate throughout the year. Cordero Mining Co., the largest producer in the preceding year, was in operation only the first 6 weeks of 1950.[14] These two companies, together with the third-ranking producer, accounted for 90 percent of domestic production in 1950. Operators of the remaining 13 properties accounted for the balance.[15]

These companies were all small in terms of assets and employees. They worked small irregular deposits in California and Nevada. Although there was some "stripper," or surface, mining, most of their production was from deep pit operations. Since the mercury content of American ore is low, averaging less than 10 pounds per ton, it has

[8] U.S. Bureau of Mines, Bull. 586, U.S. Department of the Interior, "Mineral Facts and Problems," pp. 515-516 (1956).
[9] "Mercury (Quicksilver)," supra, p. 6.
[10] Id., p. 26.
[11] See the President's Materials Policy Commission, II, "Resources for Freedom," p. 94 (1952).
[12] Infra., p. 10.
[13] "Materials Survey on Mercury," supra.
[14] U.S. Bureau of Mines, "Minerals Yearbook 1950," p. 776 (1951).
[15] Id., p. 774; see appendix table III.

been most economical to recover the metal at or near the mine site.[16]

Recovery of the mercury metal is usually accomplished by a distillation process. Cinnabar, the principal ore mineral, is roasted in comparatively simple furnaces or retorts to volatilize the mercury. After removal of the sulfur content, the vapor is condensed into liquid mercury. This is known as prime virgin grade, 99.9 percent pure.[17] About one-fifth of all the mercury consumed in the United States is further treated by filtration, distillation, or electrolytic processes. This specially purified mercury commands substantial price premiums over the prime virgin grade.[17] While the latter is sold in cylindrical steel or iron flasks, each containing 76 pounds of mercury, the premium grade is usually packaged in small earthenware, glass, or plastic bottles or jugs holding from 4 ounces to 10 pounds of the liquid metal.[18]

In addition to the primary production of mercury processed from ores, varying amounts have been reclaimed from scrap. Secondary mercury is produced from battery scrap, dental amalgams, mercury boilers, electrical apparatus, and other sources. Although statistics on secondary mercury prior to 1954 are incomplete, it would appear that this has been a small but growing source of supply.

II. Government Assistance to the Industry

At the outbreak of the Korean emergency, the Government found little necessity to stimulate production in the depressed domestic industry. Existing stocks, arising from World War II surpluses and a large 1949 purchase of 80,000 flasks from Italy with counterpart funds, appeared adequate for immediate requirements. Moreover, the Government expected that imports and anticipated domestic production would be adequate for future requirements. As part of the general domestic minerals expansion program, however, exploration assistance was extended to mercury in 1951 and a tax amortization expansion goal was announced in 1952. The principal program of assistance to the industry was not initiated until 1954 when increasing world demand limited previously available imports. At that time, a floor price purchase program for mercury was authorized.

A. THE DOMESTIC PURCHASE PROGRAM

1. Need for a program

Effective July 9, 1954, the General Services Administration established a Defense Production Act purchase program for mercury. The Administrator of GSA stated that—

> the program, authorized by the Office of Defense Mobilization, is designed to broaden the mobilization base of the metal and to increase its supply for defense and industrial purposes.[19]

The necessity for the program was predicated on the results of an intensive study of the mercury supply situation by GSA.[20]

[16] "Mineral Facts and Problems," supra, p. 514.
[17] "Mercury (Quicksilver)," supra, p. 4.
[18] Id., pp. 4–5.
[19] General Services Administration, Press Release 278, July 6, 1954.
[20] Memorandum entitled "Program for Stimulation of Production of Mercury on the North American Continent," dated June 30, 1954, enclosed with covering letter of July 1, 1954, from A. J. Walsh, Commissioner, General Services Administration, to Elmer H. Weaver, Assistant Director for Materials, Office of Defense Mobilization. (Hereinafter referred to as "Memorandum of June 30, 1954.")

A considerable increase in demand, partly for Government use, was anticipated. Imports, especially from Italy and Spain, had been relied on in the past to fulfill the demand exceeding the available domestic production. Yet, despite a steady price rise in the first half of 1954 from $187 a flask to $275, imports were actually declining. The increase in demand was worldwide, and foreign production previously coming to the United States was now reportedly being attracted elsewhere. It appeared necessary to rely primarily on production obtainable on the North American continent to meet critical demands.

However, the domestic industry was still in a depressed state. From 1944 until the Korean emergency many domestic mines shut down, some were allowed to fill with water, others caved in. This was attributable to the decline of prices to prewar levels after World War II, moving against the trend of prices of almost all other commodities.[21]

Production did not keep pace with increased demand which occurred with the involvement of the United States in Korea in mid-1950, although the price advanced from an annual average of $81 per flask in 1950 to an annual average of $210 in 1951. The total production for 1951 amounted to 16 percent of consumption compared with 13 percent in 1950.[22] It is apparent that the domestic mercury producers, plagued with wide fluctuations in the price of mercury in previous years, were reluctant to expand after the low ebb of production in 1950.

With this situation in view, it was deemed necessary to stimulate production on this continent. Accordingly, it was decided to establish a guaranteed floor price for mercury over a period of time sufficient to enable producers to amortize the cost of reopening and reequipping mines, and to insure a reasonable profit.[23]

2. The floor-price program

The floor-price program constituted a guarantee by the Government to purchase prime virgin mercury produced in the United States, including Alaska, at a set price through December 31, 1957, or until 125,000 flasks had been purchased.[24] The price set was $225 f.o.b. delivery point for a 76-pound flask.[24] It was estimated that such a floor price would encourage domestic production to reach a level of 30,000 flasks a year. Since the market price was considerably above that figure no immediate purchases were anticipated.[25] However, it was expected that the newly instituted embargo on exports would ease the tight domestic supply situation and, as a result, the high prices would decline and sufficient production would thus be offered to the Government.

Although the program aided in stimulating domestic production to levels unmatched since World War II years, it was unsuccessful in obtaining supplies of mercury for the Government. The domestic market price remained well above the floor price until late 1957, and only a total of 9,428 flasks[26] was purchased by the Government.[27] In

[21] "Materials Survey on Mercury," supra.
[22] See appendix table II.
[23] "Memorandum of June 30, 1954," supra.
[24] 19 F.R. 4318 (1954). In addition, as part of the plan to stimulate continental expansion, a similar program was established authorizing procurement of up to 75,000 flasks from Mexican producers.
[25] "Memorandum of June 30, 1954," supra.
[26] General Services Administration, "Comptroller's Report," Dec. 31, 1958.
[27] Because of a dispute over the type of flask required, deliveries continued beyond the life of the program, until Mar. 31, 1958. U.S. Bureau of Mines, "Minerals Yearbook 1957," p. 823 (1958).

November 1957 the program was extended for an additional year. Authorized to purchase 30,000 flasks of mercury during 1958 [28] at $225 a flask, GSA obtained an additional 14,892 flasks. Accordingly, under the two price-support programs the Government obtained 24,320 flasks of mercury at an expenditure of $5,472,000.[29] While purchases were far below the maximum of 155,000 flasks authorized under the 1954–57 and 1958 programs,[30] the high rate of domestic production reached in 1957 has continued until the present.

Small producers had been particularly invited by GSA to participate in the program.[31] However, deliveries had to be offered in lots containing not less than five flasks.[32] GSA has advised that this minimum was dictated by the economies realizable in sampling and checking lots of this quantity or more. Owners of small mines with very small production could postpone sale of their production until five flasks had been accumulated, or, in the alternative, sell small amounts to dealers for ultimate resale to GSA.

Nine producers participated directly in the domestic purchase program. In addition, 5 dealers sold to GSA the accumulated production of 11 other producers who thus participated indirectly. Two producers supplied 54 percent of the total mercury purchased. Another four producers supplied an additional 35 percent.[33]

B. EXPLORATION ASSISTANCE

Prior to 1954 the only DPA assistance utilized by the domestic industry was the exploration program to discover new sources of mercury ore in the United States and Alaska. This program was administered by the Defense Minerals Exploration Administration (DMEA) and its predecessor, the Defense Minerals Administration.[34]

From its inception on April 6, 1951, to December 31, 1958, 138 applications were received for mercury exploration assistance. Of these, 46 resulted in contracts with 42 individuals, firms, or corporations. Through the end of 1958, 68 applications were denied, mainly because of the extremely low geological probability of making significant discoveries. In addition, 20 were withdrawn and 4 were pending. The total value of the contracts executed was $2,885,655. Government participation amounted to $2,130,246, of which $1,191,401 has been disbursed.

As of December 31, 1958, the status of the 46 contracts is shown by the following:

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[28] 32A CFR ch. UIV Reg. 11 § 5 (1958).
[29] "Comptroller's Report," supra.
[30] The Mexican purchase program, also extended through 1958, resulted in total purchases of 2,153 flasks.
[31] General Services Administration, Press Release 280, July 12, 1954.
[32] 19 F.R. 4318 (1954).
[33] Advice of GSA.
[34] See Attorney General, "Defense Minerals Exploration Assistance," report pursuant to sec. 708(e) of the Defense Production Act of 1950, as amended (Nov. 10, 1958).

TABLE 1

	Number	Government participation	Total value of contracts	Government disbursements	Repayments
In force; not certified	[1] 13	$656,685	$919,175	$295,893	$166,193
Terminated and certified	12	747,112	995,149	627,149	436,892
Terminated; not certified	17	574,250	767,399	268,359	13
Canceled; not certified	4	152,199	202,932		
Total	46	2,130,246	2,885,655	1,191,401	603,098

[1] One contract was certified as to another mineral but continues in force as to mercury exploration.

Source: Office of Minerals Exploration, U.S. Department of the Interior.

Mercury exploration contracts were distributed among eight States. In terms of Government participation, California, Alaska, and Texas accounted for 86 percent of the total, with California alone accounting for 53 percent.[35]

Of the 46 contracts granted, 12 were certified as successful discoveries of mercury deposits. In addition, the amount of repayments of Government assistance by operators with in force but uncertified projects indicates the probability of additional certifications.

This program has been very successful in adding to overall domestic reserves of mercury. While a 1958 estimate of total U.S. reserves is not yet available, the latest estimate by Geological Survey shows a total of 315,300 flasks, minable at $250 a flask (approximately the 1957 price), in measured and indicated and inferred reserves. This is distributed as follows:

TABLE 2.—*Mercury reserves of the United States*

[In 76-pound flasks]

	Measured and indicated	Inferred		Measured and indicated	Inferred
Alaska	30,000	10,000	Oregon	8,000	7,300
Arizona	2,000	3,000	Texas	2,000	7,000
Arkansas		1,000	Utah and Washington		1,000
California	64,000	90,000			
Idaho	20,000	6,000	Total	157,000	158,300
Nevada	31,000	33,000			

Source: U.S. Bureau of Mines "Minerals Yearbook, 1957," p. 836 (1958).

In December 1957, the Office of Minerals Exploration estimated the amount of recoverable mercury in potential ore reserves in certified projects as approximately 49,500 flasks. This represented about 31 percent of the inferred ore reserves and approximately 16 percent of total mercury reserves of the United States. The latest OME estimate, in December 1958, has increased the reserve figure from certified projects to approximately 100,900 flasks.

[35] Advice of Office of Minerals Exploration, the successor agency to DMEA.

C. TAX AMORTIZATION

A relatively minor part in the defense expansion of domestic mercury production was played by the granting of accelerated tax amortization privileges. Although a tax amortization expansion goal was established in 1952, there were no applicants until 1955. In all, only three applications for certificates of necessity were received, and two were granted.

A new company in the mercury producing field, Rare Metals Corp. of America,[36] applied for a certificate of necessity covering construction of a mercury ore reduction plant at its Idaho Almaden Mine in Washington County, Idaho. The estimated cost of construction of $253,457 was certified by ODM on August 5, 1955, with $202,766 eligible for writeoff in the subsequent 5-year period.

In 1956 Sonoma Quicksilver Mines, Inc., one of the major established producers, requested a certificate of necessity covering the expansion and rehabilitation of its quicksilver mine and treatment plant at Guerneville, Calif. ODM, on October 18, 1956, certified $788,800 as the cost of construction, granting similar privileges of writeoff on $631,040.

Another established producer, Cordero Mining Co.,[37] filed an application on November 11, 1955, for a certificate of necessity covering construction of 10 housing units at its mercury mine in Humboldt County, Nev. The estimated cost of construction was $12,000. However, the facilities were completed prior to the filing of the application. On April 23, 1956, the application was denied in accordance with ODM regulations requiring that an application be filed before construction is begun.

III. The Effects of Government Aid

While the influence of each of the DPA programs cannot be measured with precision, it is clear that the purchase program and exploration assistance contributed greatly to a stimulation of mercury production and an increase in competition within the domestic industry. At the outbreak of the Korean emergency, production was 6,535 flasks of mercury.[38] This represented only 13 percent of total domestic consumption. It was not until 1954, the year the purchase program was instituted, that production exceeded 50 percent of consumption. In 1957 production had reached 34,625 flasks of primary and 5,800 flasks of secondary mercury, for a total figure of over 40,000 flasks. This was now more than three-quarters of our annual reported consumption. Preliminary statistics for 1958 indicate that this upward trend is continuing.[39]

Our decreasing dependence on foreign sources was also reflected in the general decline in mercury imported for consumption during the period 1950–57. From a high of 83,000 flasks in 1953, just before the floor-price program, imports declined to a low of 20,000 flasks in 1955. In 1957, the figure was 42,000 flasks.[40]

Import statistics during this period may be understated by amounts representing acquisitions for the strategic stockpile and other govern-

[36] It was organized in 1954 by El Paso Natural Gas Co. and Western Natural Gas Co. to engage in the mining of rare and strategic metals.
[37] A 100 percent subsidiary of Sun Oil Co.
[38] This included 4,535 flasks of primary production and 2,000 flasks of secondary production.
[39] See appendix table II.
[40] See appendix table IV.

mental uses.[41] However, ODM and OCDM have announced that stockpile objectives have been filled.[42]

Although the floor-price program thus helped stimulate production, it was not as successful in eliciting offers in the volume required for Government needs. Of the initial 125,000 flasks desired of the domestic industry, only 24,320 flasks were obtained during the period 1954–58. However, substantial Government supplies were procured from other sources. Most of the anticipated needs were obtained from foreign suppliers by GSA under the Federal Property and Administrative Services Act of 1949.[43] In addition, acting on behalf of GSA, the Commodity Credit Corporation bartered surplus agricultural commodities for considerable quantities of foreign mercury under the CCC Charter Act, as amended,[44] and the Agricultural Trade Development and Assistance Act of 1954.[45]

The bulk of the purchases under the floor-price program came near the end of 1957 and at various periods in 1958 when the market price dropped to levels at or below that of the Government purchase price of $225. In this period the program upheld the market for the domestic industry.

The stimulus to domestic production brought with it an increase in competition from new producers and a rearrangement of competitive rank among the older firms. In 1950, only 16 mines were open. Eleven properties had 99 percent of production, most of which was attributable to Sonoma Quicksilver, the only company producing throughout that year. The number of mines operating rose to 98 in 1955 and 147 in 1956, declining to 120 in 1957 as some of the smaller, more marginal properties were closed. Most producers owned but a single mine, and many of these were only one- or two-man operations. Whereas in 1950 one company had the bulk of the output, it took 18 mines in 1955, and 21 mines in 1956, to produce 94 percent of domestic production.[46]

It is true that some of this increased operation represented the reactivation of dormant properties by companies in the industry.[47] However, a number of new companies were attracted to the industry by the Government programs and began opening new mines.

During this period there were considerable changes in the competitive ranking of industry members. However, this can be indicated only in a general way in view of the confidential nature of Bureau of Mines data. Before the purchase program was instituted, the three leading producers in 1953 accounted for over 70 percent of production. By 1957 these three companies, no longer collectively the leaders, held only 35 percent of production. In that year 70 percent of production was held by a total of seven companies, the then three leading companies holding 50 percent.

Our survey of the Government programs indicated that in operation they were fair and nondiscriminatory. The denials of applica-

[41] "Mercury (Quicksilver)," supra, p. 15.
[42] "Stockpile Report to the Congress," January–June 1956; July–December 1956; January–June 1957; July–December 1957; January–June 1958.
[43] 40 U.S.C. § 471.
[44] 15 U.S.C. § 714.
[45] 7 U.S.C. § 1691.
[46] See appendix Table III.
[47] For instance, 2 officials of the De Coursey Mountain Mining Co. of Alaska testified before the Tariff Commission that 1 of the major factors in their decision to start production at the Red Devil Mine in Alaska was the floor price established by GSA. Transcript of proceedings before the U.S. Tariff Commission, "Investigation No. 32, Hearing on Mercury (Quicksilver)," pp. 66–67, 69, Aug. 5, 1958.

tions for exploration assistance, for example, were mainly based upon sound geological factors. In that program, the three leading producers of 1953 all received contracts. Two of them made certified discoveries. Of the four other companies which joined the ranks of the seven leaders in 1957, three received contracts. Their resulting discoveries helped raise them to the status of leading producers. In addition, eight smaller companies made discoveries under exploration contracts. These eight hold collectively more than half of estimated recoverable ore reserves derived from the exploration program. Their enhanced reserve position suggests a possible future improvement in their competitive standing.

Nevertheless, despite these improvements in the competitive picture in the domestic industry, it must be concluded that, as in the case of our tungsten industry,[48] the future of our mercury industry—

is precariously dependent, not on domestic competition, but upon the course of operations of the richer, more economically worked foreign supplies.[49]

For, while domestic production and reserves have increased, foreign production and reserves have also risen. Accordingly, the domestic producers still have a minor position in the world industry.[50]

World production expanded from 143,000 flasks in 1950 to 235,000 flasks in 1957,[51] with world reserves of measured and inferred mercury ore now believed to be adequate to meet world demand for a period of 30 years.[52]

In 1957, the Geological Survey estimated foreign mercury reserves, minable at $250 a flask, as follows:

TABLE 3.—*Mercury: Foreign reserves*

[In 76-pound flasks]

	Measured	Inferred and indicated		Measured	Inferred and indicated
Canada	150,000	150,000	U.S.S.R.	[2] 850,000	500,000
Mexico	30,000	100,000	Japan	30,000	50,000
South America	4,000	10,000	China		500,000
Spain	[1] 100,000	1,000,000	Turkey		50,000
Italy	500,000	1,000,000	Philippines	45,000	45,000
Yugoslavia	150,000	300,000			
Czechoslovakia	10,000		Total (rounded)	1,875,000	3,710,000

[1] Data inadequate and reserves known to owners may be much larger.
[2] Based on U.S.S.R. estimate, which seems large for amount of exploration that had been done at time of estimate.

Source: U.S. Bureau of Mines, "Minerals Yearbook 1957," p. 836 (1958).

The combined output of Spain and Italy has declined from 73 percent of world production in 1950 to 48 percent in 1957. The Spanish-Italian combine was reportedly dissolved in 1950, after sales by Italian producers to the U.S. Government allegedly in excess of their sales quotas under the combine's agreement.[53] Possible reconstitution may be impeded by reported continuing disagreement between the producers of the two countries over sales to Iron Curtain countries and currency payments.[54] Nevertheless, these countries are still the

[48] See Attorney General, "Expansion of Tungsten Supply," report pursuant to sec. 708(e) of the Defense Production Act of 1950, as amended (Nov. 8, 1957).
[49] Id., at p. 54.
[50] See supra, p. 7.
[51] See appendix table IV.
[52] "Materials Survey on Mercury," supra.
[53] "Minerals Facts and Problems," supra, p. 517.
[54] "Mercury (Quicksilver)," supra, p. 72.

dominant world producers of mercury. Conditions still exist which could make the foreign combine effective if it were to be reconstituted.

The floor-price program has now ended. It is still too early to tell how the domestic industry will fare in the open market without some Government assistance.[55] The relative improvement of the industry during the past few years, however, cannot alter the basic geological and economic facts. American mercury deposits are still small, irregular and scattered. They are still generally poorer than those in some foreign countries, and the production costs remain high in comparison. Whether or not the foreign group is formally reconstituted, heavy world production, coupled with further declines in world prices, could reduce the domestic industry to its 1950 position.[56] Accordingly, the improvements made in domestic competition under the Defense Production Act programs could be nullified by the course of such adverse world developments.

[55] See the testimony on this point of Royce A. Hardy, Assistant Secretary (Mineral Resources), Department of the Interior, in "Hearings Before the Subcommittee on Minerals, Materials, and Fuels of the Senate Committee on Interior and Insular Affairs," 85th Cong., 2d sess., pt. 2, at p. 957 (1958).

[56] The possible gravity of the future situation is underlined by a recent press report that Italian producers, in the face of competition from Spain, Mexico, and Yugoslavia, are holding unsold stocks approximating a full year's production. See "American Metal Market," Jan. 22, 1959, p. 7. If these supplies were to be suddenly introduced to the market, it could cause an immediate depression in world prices.

PART 2

VOLUNTARY AGREEMENTS AND PROGRAMS UNDER THE DEFENSE PRODUCTION ACT

This part reports on the Attorney General's continuous study of currently outstanding voluntary agreements and programs established under section 708 of the Defense Production Act.

There are outstanding at present 19 agreements, 5 of which are in standby status. While not yet placed on a standby basis, three other agreements are not currently active. This part reports on that study with respect to (*a*) the Foreign Petroleum Supply Agreement; (*b*) Army integration committees; (*c*) Contribution of Tanker Capacity Agreement; and (*d*) USIA Classified Agreement.

A. FOREIGN PETROLEUM SUPPLY AGREEMENT

This agreement continues in force under the sponsorship of the Department of the Interior. It establishes an industry committee to collect, evaluate, and disseminate such information on foreign petroleum supply as is needed for military and defense planning and, only after finding of emergency, to formulate plans for petroleum supply to friendly foreign countries. During the current reporting period, no meetings of the committee have been held for either purpose. Particularly, there has been no finding of present emergency authorizing formulation of a plan of action, and therefore no committee action has been taken on the draft outline of a standby plan described in my report of August 8, 1958, although individual commentary on the draft has been received.

I continue of the belief that the national defense benefits of the agreement outweigh its anticompetitive effect.

B. ARMY INTEGRATION COMMITTEES

I have approved the request, originating in the Ordnance Ammunition Command, that the Fin Stabilized Artillery Ammunition and M31 (T37) Rifle Grenade Committee be placed in standby status. Letters have been sent out by the Office of Civil and Defense Mobilization requesting the participation of the committee members in an amended plan placing the committee on a standby basis.

Notice of the acceptance by the participants of the revised plan placing the Committee on Burster Casings in a standby status was published in 23 F.R. 8870. This committee thus joins the Committees on Artillery Mechanical Time Fuzes, Cartridge Cases, and Military Pyrotechnics which are presently in a standby status. The command is presently studying the advisability of placing the Conventional Artillery and Mortar Shell Committee in a standby status.

Two of the active groups, the Small Arms Ammunition and the Ammunition Loading (Except Small Arms) Committees, have held meetings during the period. As in the past, the former committee

continues extremely active, holding three meetings during the period. The remaining active committee, Propellants and Explosives, did not meet but has scheduled meetings for the next quarter.

Four of the six integration committees sponsored by Ordnance Tank-Automotive Command met during the past 3 months. These committees are: Heavy Tactical Trucks, Light Gun Tank and Allied Combat Vehicles, Cast Armor for Track Laying Type Vehicles, and Light and Medium Tactical Truck. Although not meeting recently, the Medium and Heavy Gun Tank and Allied Combat Vehicles Committee has scheduled a meeting for the next period. The command is still considering the advisability of placing the Track for Track-Laying Type Vehicles Committee, which has not met for some time, on a standby status.

The Signal Corps' Critical Quartz Crystal Committee held a meeting during the period and has scheduled a meeting for the next quarter. The interchange of technical information is continuing.

After a review of the information supplied by the Department of the Army, it is my opinion that all of the integration committees should be continued since their actual and potential contributions to national defense outweigh their possible adverse antitrust considerations.

C. CONTRIBUTION OF TANKER CAPACITY AGREEMENT

I have been informed a sufficient number of acceptances of the revised plan have been received from the participants to enable a determination that the members, generally, have accepted the plan. Publication of the acceptances in the Federal Register is expected in the near future. In the absence of a determination of the need to reactivate the committee, meetings have not been held.

D. USIA CLASSIFIED AGREEMENT

The United States Information Agency continues to utilize this agreement, which, because of security considerations, may not be described herein. In my opinion, the public interest served by this agreement continues to outweigh its potential anticompetitive effects.

Respectfully submitted.

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The following members of the staff of the Antitrust Division also aided in the conduct of the inquiry or the preparation of the report: Joseph A. Mullin and Sidney Mintzer.

APPENDIX

APPENDIX TABLE I.—*Mercury: Consumption in the United States, by uses, 1949–58*

[In 76-pound flasks]

Uses	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958 [1]
Pharmaceuticals	3,443	5,996	2,761	1,395	1,858	1,846	1,578	1,600	1,751	1,962
Dental preparations	963	1,458	803	1,027	1,117	1,409	1,177	1,328	1,371	1,067
Fulminate for munitions and blasting caps	149	289	494	337	39	106	90	11	----	----
Agriculture (includes insecticides, fungicides, and bactericides for industrial purposes)	4,667	4,504	7,737	5,886	6,936	7,651	7,399	9,930	6,337	4,501
Antifouling paint	1,683	3,133	2,500	1,178	655	512	724	511	508	661
Electrolytic preparation of chlorine and caustic soda	755	1,309	1,543	2,507	2,380	2,137	3,108	3,351	4,025	3,190
Catalysts	2,520	2,743	2,635	1,048	826	594	729	871	859	449
Electrical apparatus	7,323	12,049	10,250	8,018	9,630	10,833	9,268	9,764	9,151	6,564
Industrial and control instruments	5,016	5,385	6,158	6,412	5,546	5,185	5,628	6,114	6,028	3,445
Amalgamation	165	192	154	151	200	203	217	239	244	155
General laboratory	345	646	524	629	1,241	1,129	976	984	894	683
Redistilled [2]	6,642	7,600	8,776	7,547	7,784	9,281	9,583	9,483	9,703	6,448
Other	6,166	3,911	12,513	6,421	14,047	1,910	16,708	9,957	11,958	6,555
Total consumption	39,857	49,215	56,848	42,556	52,259	42,796	57,185	54,143	52,889	[1] 37,300

[1] January–September 1958. Items do not add to total which has been increased to cover approximate total consumption.

[2] Redistilled mercury consumed for many of the same uses as virgin mercury, including instruments, dental preparations, electrical apparatus, and other miscellaneous uses.

Source: U.S. Bureau of Mines.

APPENDIX TABLE II.—*Mercury: Total domestic production, consumption, and average annual price, 1949–58*

Year	Domestic production			Consumption		Average annual price	
	Total	Primary	Secondary [1]	Total	Percentage: Domestic production	New York	Adjusted by Wholesale index [2]
	76-lb. flasks	*76-lb. flasks*	*76-lb. flasks*	*76-lb. flasks*	*Percent*	*76-lb. flasks*	*76-lb. flasks*
1949	11,315	9,930	1,385	39,857	28.4	$79.46	$80
1950	6,535	4,535	2,000	49,215	13.3	81.26	79
1951	9,293	7,293	2,000	56,848	16.3	210.13	183
1952	15,047	12,547	2,500	42,556	35.4	199.10	178
1953	17,137	14,337	2,800	52,259	32.8	193.03	175
1954	24,643	18,543	6,100	42,796	57.6	264.39	240
1955	28,985	18,955	10,030	57,185	50.7	290.35	262
1956	30,027	24,177	5,850	54,143	55.5	259.92	227
1957	40,425	34,625	5,800	52,889	76.4	246.98	210
1958	[3] (31,170)	[3] (27,320)	[3] (3,850)	[3] (37,300)	[3] (83.6)	229.06	[4] 192

[1] Production from battery scrap, dental amalgams, and sludges from electrolytic processes that use mercury as a catalyst. Prior to 1954, data excluded mercury reclaimed from scrapped and dismantled plants and other scrap, if such mercury could be identified and excluded from consumption.

[2] January–September 1958.

[3] Quoted price divided by Bureau of Labor Statistics Wholesale Price Index (1947–49=100).

[4] Preliminary, subject to revision.

Source: U.S. Bureau of Mines.

APPENDIX TABLE III.—*Mercury: Primary domestic production, number of mines, ore recovery, and principal producers, 1949–58*

Year	Primary production	Number of producing mines	Average recovery from ore treated	Principal producers [1]	
				Number of mines	Percent of primary production
	76-lb. flasks		*Lbs. per ton*		*Percent*
1949	9,930	23	10.3	7	98
1950	4,535	16	9.3	11	99
1951	7,293	47	6.5	9	93
1952	12,547	39	7.0	11	97
1953	14,337	49	7.8	10	96
1954	18,543	71	8.1	11	95
1955	18,955	98	6.4	18	94
1956	24,177	147	7.5	21	94
1957	34,625	120	8.4	23	97
1958	[2] (27,320)	[3]	[3]	[2] (13)	[2] (94)

[1] Producers of 100 flasks or more, except 1949 on basis of 50 flasks or more.
[2] January–September 1958.
[3] Not available.

Source: U.S. Bureau of Mines.

APPENDIX TABLE IV.—*Mercury: World production, U.S. imports and exports, 1949–58*

[In 76-pound flasks]

Year	World production [1]	U.S. imports		U.S. exports	Reexports
		General [2]	For consumption [3]		
1949	121,000	96,918	103,141	577	828
1950	143,000	90,564	56,080	447	886
1951	147,000	44,927	47,860	241	675
1952	151,000	68,686	71,855	400	259
1953	160,000	85,784	83,393	546	916
1954	180,000	65,317	64,957	860	1,436
1955	185,000	20,948	20,354	451	267
1956	215,000	52,009	47,316	1,080	2,025
1957	235,000	45,449	42,005	1,919	3,275
1958	[4]	[5] (14,558)	[5] (14,221)	[5] (440)	[5] (647)

[1] Includes Canada, Mexico, Spain, Italy, Yugoslavia, and others, chiefly U.S.S.R. (estimated).
[2] Imports for immediate consumption and entries into bonded warehouses.
[3] Imports for immediate consumption and withdrawals from bonded warehouses for consumption.
[4] Not available.
[5] January–September 1958.

Sources: U.S. Bureau of Mines and U.S. Department of Commerce.